Gauri Toshniwal

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EDUCATION

National Institute of Technology, Tiruchirappalli   Tamil Nadu, India
*Masters of Technology - Data Analytics (CGPA: **9.58**/10) [Rank 1]*   08/2023 - 06/2025
Coursework: Deep Learning, **NLP**, **Machine Learning**, Federated Learning, Mathematics (Linear Algebra, Probability)

Government College of Engineering, Nagpur   Maharashtra, India
*Bachelor of Engineering - Computer Science and Engineering (CGPA: **9.42**/10)*   06/2021
Coursework: Operating Systems, Data Structures & Algorithms, Artificial Intelligence, Databases, Discrete Mathematics, Compilers

RESEARCH

- **Forget Less, Solve More: Sequential Fine-Tuning with Adapter Shrinking for Math Word Problems**   07/2025
  Explores the impact of difficulty-based ordering, sequential fine-tuning, and progressive parameter shrinking in LLMs.
  (Master's Thesis, Accepted at 2nd AI for Math Workshop@ ICML 2025) (**Paper**) [Llama, Qwen]

- **Contextual QA for Financial Causality Detection Combining Extractive and Generative Models**   12/2024
  Secured **3rd Rank** in the English Subtask at FNP Workshop FinCausal 2025, **COLING**, with a SAS score of 96.74% and EM
  score of 70.14% using a hybrid RoBERTa-base and Gemma2-9B model. (**Paper**)

- **DECOR 2022@ICDE, 38th IEEE International Conference on Data Engineering**   **Paper**   05/2022
  Won *Best Student Paper Award* for "Object Detection in Indian Food Platters using Transfer Learning with YOLOv4"

WORK EXPERIENCE

Astreya   Remote, India
AI/ML Engineer   07/2025 - Current
AI/ML Intern   01/2025 - 06/2025

- **Ticket Volume Forecasting:**
  Developed a **ticket volume forecasting system** on GCP by fetching data from BigQuery, orchestrating workflows with
  Airflow, and running Python-based models. Classified time series into **lumpy, erratic, smooth, and intermittent** categories,
  applying **Croston's method and its variants** for sparse demand, **exponential smoothing**, and **AutoARIMA** for smooth
  series. Integrated forecasts into **capacity management tools**, enabling delivery managers to make **data-driven decisions** for
  workforce planning and resource allocation.

Findability Sciences   Remote, India
Data Scientist (Onsite - Hindustan Times Digital)   05/2021 - 08/2023

- **Demographics (Gender, Age, Interest) Prediction:**
  Built user-level classifiers for gender, age, and interest prediction using grammatical and entity-based features from news
  headlines, achieving an F1 score of 0.65 for **2M** users daily. Eliminated reliance on third-party data, saving **₹500,000/month**.
  Migrated feature engineering and model inference pipelines to PySpark for scalability.
- **Subscription Churn Prediction and Retention Feed:**
  Developed XGBoost models (d-60, d-30, d-15) to track churn probability shifts and used **SHAP** for interpretability. Refactored
  backend logic and exposed model predictions via a new API endpoint in the Flask server, powering a personalized **retention
  feed** that improved user engagement.

ACADEMIC ACHIEVEMENTS

- **Awarded Reliance Foundation Postgraduate Scholarship for the year 2023-24**   06/2024
  Received by top 100 students nationwide for exceptional academic achievement and potential in technology and engineering
- **ACM Summer School on Responsible and Safe AI Certificate**   06/2024
  Selected and Attended summer school hosted by IIT Madras
- **AI Safety Fundamentals - Bluedot Impact Certificate**   03/2024 - 06/2024
  Selected for a 12-week online course, covering a range of technical AI alignment research agendas

SKILLS

Languages and Frameworks: Python, C++, C; Pandas, Scikit-learn, PyTorch, Numpy, Flask, Pyspark
Tools and Platforms: Git, HuggingFace, SQL, MongoDB, Redis, Looker Studio, Docker, BigQueryML, GCP, Vertex AI
Areas of Interest: NLP, Deep Learning, AI Safety